

21



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,046	06/27/2003	Mingzhong Ding	STL11191/40046.0250US01	7926
23552	7590	02/23/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			HABERMEHL, JAMES LEE	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/608,046	Applicant(s) DING ET AL.	
	Examiner James L Habermehl	Art Unit 2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14, 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2651

1. This Office Action is in response to application filed 27 June 2003, which papers have been placed of record in the file.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Messenger et al. Messenger et al. Figures 4-6 meet all the limitations of the claims, including determining a seek profile compensation value from seek profile compensation information based on a current operating temperature (204/206), and compensating a pre-determined seek profile using the seek profile compensation value to create a temperature compensated seek profile and performing the seek operation using the temperature compensated seek profile (210/212/214 and Figure 6). Regarding claim 16, the determination is based on the current operating temperature (210) and the seek length (206).

4. Claims 1-14 and 19-20 are allowed over the prior art of record. Claims 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 1 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method of compensating a pre-defined seek profile comprising performing one or more seek operations at each of a plurality of initial data storage device operating temperatures, and obtaining a seek profile compensation value for each of the plurality of initial data storage device operating temperatures sufficient to maintain the temperature below the threshold, as described in Figures 3-4 and pp. 7-9 and presented in the environment of claim 1. It is noted that the closest prior art, Messenger et al., shows seek profile temperature compensation similar to the claimed invention. However, Messenger et al. fails to disclose compensating a pre-defined seek profile comprising performing one or more seek operations at each of a plurality of initial data storage device operating temperatures, and obtaining a seek profile compensation value for each of the plurality of initial data storage device operating temperatures sufficient to maintain the temperature below the threshold as described in Figures 3-4 and pp. 7-9 and claimed.

Claim 17 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method of performing a seek in a data storage device comprising determining a seek profile compensation value based on the current operating temperature and the recent changes in operating temperature, as presented in the environment of claim 17. It is noted that the closest prior art, Messenger et al., shows seek profile temperature compensation similar to the claimed invention. However, Messenger et al. fails to disclose performing a seek in a data storage device comprising determining a seek profile compensation value based on the current operating temperature and the recent changes in operating temperature as claimed.

Claim 18 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method of performing a seek in a data storage device comprising comparing the seek profile compensation value with the second compensation value to determine which is a most compensating profile compensation value, and using the most compensating profile compensation value to create a temperature compensated seek profile, as presented in the environment of claim 18. It is noted that the closest prior art, Messenger et al., shows seek profile temperature compensation similar to the claimed invention. However, Messenger et al. fails to disclose performing a seek in a data storage device comprising comparing the seek profile compensation value with the second compensation value to determine which is a most compensating profile compensation value, and using the most compensating profile compensation value to create a temperature compensated seek profile as claimed.

Claim 19 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a means for compensating a pre-determined seek profile based on a current operating temperature, as described in Figure 7 and specification pp. 8-11 and presented in the environment of claim 19. It is noted that the closest prior art, Messenger et al., shows seek profile temperature compensation similar to the claimed invention. However, Messenger et al. fails to disclose means for compensating a pre-determined seek profile based on a current operating temperature as described in Figure 7 and specification pp. 8-11 and as claimed.


Art Unit: 2651


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Korbel et al. ('838) Figures 4-5, Codilian et al. Figures 3-6, Korbel et al. ('453) Figure 4, Francis et al. Figures 2-6, and Mori et al. Figure 4 show seek profile temperature compensation similar to applicant's invention. Hamaguchi et al. Figures 10-11 show compensating for temperature related seek disturbances. Soyama et al. Figure 5 and Ho et al. Figure 4 show measuring VCM coil resistance changes due to temperature.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James L Habermehl whose telephone number is (703)305-6975. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703)308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Habermehl/jlh
12 Feb 05


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600